

PLC γ 2 (h2): 293T Lysate: sc-172701

BACKGROUND

Phosphoinositide-specific phospholipase C (PLC) plays a critical role in the initiation of receptor mediated signal transduction through the generation of the two second messengers, inositol 1,4,5-triphosphate and diacylglycerol from phosphatidylinositol 4,5-bisphosphate. There are many mammalian PLC isozymes, including PLC β 1, PLC β 2, PLC β 3, PLC β 4, PLC γ 1, PLC γ 2, PLC δ 1, PLC δ 2 and PLC ϵ . After stimulation of the collagen receptor glycoprotein VI in human platelets, PLC γ 2 associates with several tyrosine-phosphorylated proteins (Syk, SLP-76, Lyn, linker for activation of T cells (LAT) and the FcR γ chain), which bind to its C-terminal SH2 domain. PLC γ 1 associates with Syk in B cells, but PLC γ 2 does not associate with Syk in platelets. The C-terminal SH2 domain is involved in the regulation of PLC γ 2. In addition, Btk can induce PLC γ 2 tyrosine phosphorylation and initiate calcium mobilization in CD72-stimulated B lymphocytes.

REFERENCES

1. Suh, P., et al. 1988. Inositol phospholipid-specific phospholipase C: complete cDNA and protein sequences and sequence homology to tyrosine kinase-related oncogene products. *Proc. Natl. Acad. Sci. USA* 85: 5419-5423.
2. Emori, Y., et al. 1989. A second type of rat phosphoinositide-specific phospholipase C containing a Src-related sequence not essential for phosphoinositide-hydrolyzing activity. *J. Biol. Chem.* 264: 21885-21890.
3. Meldrum, E., et al. 1991. A second gene product of the inositol-phospholipid-specific phospholipase C δ subclass. *Eur. J. Biochem.* 196: 159-165.
4. Rhee, S.G. and Choi, K.D. 1992. Regulation of inositol phospholipid-specific phospholipase C isozymes. *J. Biol. Chem.* 267: 12393-12396.
5. Kim, M.J., et al. 1993. Cloning of cDNA encoding rat phospholipase C- β 4, a new member of the phospholipase C. *Biochem. Biophys. Res. Commun.* 194: 706-712.
6. Jhon, D., et al. 1993. Cloning, sequencing, purification and G_q -dependent activation of phospholipase C- β 3. *J. Biol. Chem.* 268: 6654-6661.

CHROMOSOMAL LOCATION

Genetic locus: PLCG2 (human) mapping to 16q23.3.

PRODUCT

PLC γ 2 (h2): 293T Lysate represents a lysate of human PLC γ 2 transfected 293T cells and is provided as 100 μ g protein in 200 μ l SDS-PAGE buffer.

APPLICATIONS

PLC γ 2 (h2): 293T Lysate is suitable as a Western Blotting positive control for human reactive PLC γ 2 antibodies. Recommended use: 10-20 μ l per lane.

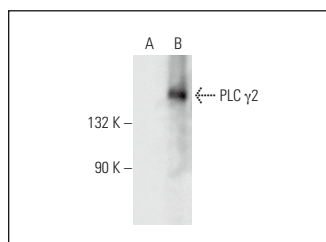
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

PLC γ 2 (A-3): sc-390389 is recommended as a positive control antibody for Western Blot analysis of enhanced human PLC γ 2 expression in PLC γ 2 transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

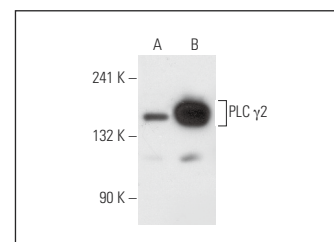
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended:
1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048.

DATA



PLC γ 2 (A-3): sc-390389. Western blot analysis of PLC γ 2 expression in non-transfected: sc-117752 (A) and human PLC γ 2 transfected: sc-172701 (B) 293T whole cell lysates.



PLC γ 2 (B-10): sc-5283. Western blot analysis of PLC γ 2 expression in non-transfected: sc-117752 (A) and human PLC γ 2 transfected: sc-172701 (B) 293T whole cell lysates.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.